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Department of Conservation
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ATTN: UIC Discussion Draft

To whom it may concern

On behalf of the undersigned organizations, our members and supporters, thank you for the opportunity to provide comments on the Updated Underground Injection Control (UIC) Regulations, Pre-Rulemaking Discussion Draft. Updating these regulations is a positive step toward improving oversight of injection projects and wells, and is urgently needed in order to protect groundwater and public health. This discussion draft, while a positive step, falls well short of carrying out the goals of the Safe Drinking Water Act (SDWA), which is to protect sources of drinking water. The UIC Class II program both federally, and at the state level, has primarily served as the permitting mechanism to allow for and facilitate oil and gas production and wastewater disposal. California must take this opportunity and restore the goals of this program to uphold SDWA and provide adequate protections for drinking water.

The discussion draft is deficient in many areas that must be addressed in order to increase protections for sources of drinking water and uphold the goals of SDWA. The regulations must be amended to:

- **Protect all potential sources of drinking water by removing the definition of "freshwater" in Sec 1720.1(d).** Limiting protections to waters of 3,000 ppm total dissolved solids (TDS) or less fails to meet the federal mandate for protecting all

potential sources of drinking water and also falls short of statutorily mandated protection at the state level. California statute requires protection of any aquifer that “is, or may reasonably be, used for any beneficial use,” when considering potential aquifer exemptions (Public Resources Code Sec. 3131). These regulations must not undercut this level of protection. Based on California’s tenuous water supply issues, the Division of Oil, Gas and Geothermal Resources (the Division) must go beyond the federal Underground Source of Drinking Water (USDW) definition and the minimum standards set by the Legislature and must protect waters with up to 35,000 ppm TDS, as water of this salinity level is commonly used as drinking water with existing desalinization technology.

- **Explicitly require annual reviews of injection projects in regulation**, with a protocol for conducting the review that will ensure continuing compliance with these regulations, and all applicable laws and regulations, for all existing and proposed projects. All documentation for the annual reviews must be submitted to the Division and made publicly available and posted to the Division’s website.
- **Require groundwater monitoring for all injection projects that present risk of contaminating nearby aquifers that have potential beneficial uses.** Sec 1724.7(a)(3)(C) allows unspecified methods, including groundwater monitoring, to ensure zonal isolation. This section needs more specificity and must require groundwater monitoring and quality modeling. The State Water Resources Control Board (SWRCB) must be designated the responsible agency for approving groundwater monitoring/modeling plans or concurring with exemption requests, rather than the current, flexible language that requires documentation of “consultation” with the SWRCB or a Regional Water Board.
- **Update well integrity and construction standards.** Specific well integrity specifications and standards must be included in the regulations which assure the integrity of the well throughout its useful life and abandonment. This has been a high priority task for the Division for many years (see the “Road Map”, DOC/DOGGR, 2012) and was specified in Discussion Paper, Aug. 17, 2015, yet these regulations do not include any well construction standard improvements and integrity monitoring requirements.
- **Require seismic and ground movement monitoring and modeling.** Specific UIC project monitoring and modeling improvements must be included in the regulations which assure the program provides protections and controls of UIC projects throughout their useful lives and abandonments. Injection projects have been linked to induced seismicity in California, and ongoing seismicity issues in other states. These regulations must monitor, control and document the risks of induced seismicity and ground movements related to UIC project operations, activities, and zonal responses. In addition to monitoring and public reporting of the monitoring, the regulations must include measures to mitigate seismic risk, such as reporting of daily injection pressures, emergency shutdown protocols for any induced seismic

activity, and analysis of pressure changes that could result from operating hundreds of injection and production wells within a project area.

- **Strengthen injection fluid analysis section 1724.7.2 by:**
 - **Improving the chemical testing requirements.** Injectate testing must be expanded to test for a broader set of constituents that more closely matches the chemical additives that have been introduced into wells, including during maintenance and rework. Regulations must specify chemical constituents and test results be submitted and made publicly available within 30 days and reported on a public website. The frequency of chemical analysis tests must be increased to at least monthly or whenever new sources are proposed – whichever is more frequent. Allowing for up to two years to pass between tests is totally inadequate. Sec 1724.10 (d).
 - **Requiring complete and public chemical disclosure of additives.** These regulations must require that any additive - including, but not limited to routine well cleanouts, additives used in Enhanced Recovery (ER or EOR), and other downhole activities - to an injection well be reported and publicly available. Reporting requirements and disclosure of added chemicals must meet the standard set with Senate Bill 4 for well stimulation fluids, which mandates disclosure of the identities and concentrations of all chemicals used, and does not allow for the identities of chemicals to be claimed as a trade secret. Chemical additives must be made publicly available on the Division's website in an easy to access and use format.
 - **Requiring disclosure of the sources of injected fluids.** This section should specify that operators report the source of any fluids injected downhole, such as the specific production well where wastewater originated, and any treated or freshwater used for ER.
- **Define different UIC activities and include specific requirements that apply to each activity of the UIC project.** These regulations do not differentiate between disposal, various ER subcategories, gas storage, or other activities that may fall in the UIC Class II program. The regulations must clearly define each activity and specific requirements for each.
- **Require specific regulations for each type of steam injection.** We understand that regulations for steam injection will be included in future draft regulations. We request discussion draft language of this section prior to inclusion in an official rulemaking.
- **Require emergency response plans for all injection projects and wells.** Operators must submit, prior to receiving a Project Approval Letter, an emergency response and contingency plan for consideration by the Division, and the relevant agencies depending on project type. Emergency response plans must account for potential leaks, breaches, blowouts and any other unauthorized releases as well as authorized releases.

In addition to these top priority issues that must be addressed, we recommend other improvements. Some of the following recommendations may not necessarily be addressed by amending the discussion draft but would be incorporated in supporting documents, such as, a statement of need for this revision, various Memoranda of Agreement (MOA's) with other agencies, and submittals demonstrating compliance and fulfillments of EPA concerns and requests. The Division must:

- **Specify periodic (every five years) review of the UIC program, with regulatory updates if deficiencies are identified.**
- **Complete an updated MOA** with the State Water Resources Control Board (SWRCB) and other relevant agencies, including the California Public Utilities Commission (CPUC), the Office of Environment Health Hazard Assessment, and Office of Emergency Services.
- **Define and clarify "Permit"/"Letter" application process requirements.**
Discussion Draft regulations mention an "Approval Letter" but without an explicit outline of a process for an operator and Division to follow to obtain/grant an injection approval. We submit a number of recommendations for components of a more robust permit application process:
 - Standardized forms to be submitted, posted, and circulated electronically.
 - Opportunity for the public to comment on applications prior to issuance of permits or approval letters.
 - Direct notice to neighbors, nearby water providers, and other interested stakeholders prior to the permit/letter approval.
 - Clarifications and definitions for consideration of an injection project or an individual well. Regulations must specify that both injection projects with one or more wells and individual injection wells, outside or within an existing project, must receive Project Approval Letters or permits.
 - The regulations must clearly define what can qualify as an injection project, including how many wells, what geographic or geologic areas/zones/formations, or types of activities can be grouped into a single project.
 - The regulations must also clarify that additional wells in an existing project, cannot be granted an approval letter without providing updated project-wide analyses and modeling.
 - Specify in the permit/letter application process which agencies beyond the Division must review the application. For example, prior to approving a UIC project, the applicant must certify that local and regional land use permits have been issued. Additionally, although the Division may remain as the lead agency for downhole and some surface activities and facilities, all permits must also be reviewed and approved by the SWRCB. For utilities-related (e.g., gas storage) UIC projects, the CPUC must also review and consider the project in order for the Division to grant a permit/Project Approval Letter.

In addition to the above, we note that the U.S. EPA Region 9 critique of the UIC program (2011, Horsley-Witten report) contained many findings and recommendations relevant to these new regulations. We request that Division provide an updated status report as to how deficiencies and recommendations from that critique have been met or incorporated through the promulgation of these new regulations. We feel this is critical to clearly state to the public, the Legislature, and EPA that the findings and recommendations have been met by these regulations or will be met with future efforts; an MOA regarding such removal of deficiencies would be appropriate.

Thank you for the opportunity to submit these comments. We look forward to your response.

Sincerely,

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